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09/838,411	04/19/2001	Marion Detert	Beiersdorf 652.1-KGB	9352

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EXAMINER
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WILSON, DONALD R

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 10/17/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/838,411

Applicant(s)

DETERT ET AL.

Examiner

Donald R Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION****Response to Election of Species**

1. Applicant's election to prosecute the invention of the specie as exemplified in Preparation Example 1, in Paper No. 9, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

**Response to Amendment**

2. Applicant's amendment filed 9/15/03, has been fully considered with the following results.
3. The amendment is not deemed to be persuasive in overcoming the rejection under 35 U.S.C. § 112, first paragraph, and the rejection is maintained for reasons discussed below.
4. The amendment overcomes in part the rejection under 35 U.S.C. § 112, second paragraph, but is maintained for reasons discussed below.

**Previously Cited Statutes**

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

**Claim Rejections - 35 USC § 112, First Paragraph**

6. **Claims 1-4 and 6-12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for comb polymers wherein:**
- a. the polyester side-arms contain salts of sulfonic acid, does not reasonably provide enablement for polyester side-arms containing sulphone groups,**
  - b. the main chains are a polyacrylic acid, polymethacrylic acid, or an ester of these acids with C<sub>1</sub>-C<sub>22</sub> aliphatic, cycloaliphatic or aromatic alcohols, does not reasonably provide enablement for main chains of polymeric aliphatic, cycloaliphatic and aromatic polycarboxylic acids and salts or esters thereof, and**
  - c. the side chains are attached to the main chain through ester linkages, does not reasonably provide enablement for polyester side chains attached to the main chain through an ether linkage (Claims 3 and 7-9 only).**

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The basis of this rejection was stated in Detailed Action § 11-14 of the previous Office Action.

7. In regards to (a), applicant's statement that the Examiner's statement is incorrect is interesting but is not deemed to be persuasive. Applicant has not addressed the merits of the stated rejection and the stated reasons for non-enablement of comb polymers with polyester side-chains containing sulphone groups. It remains that "[s]ulphone groups are not acid groups, but rather an '-SO<sub>2</sub>-' group bearing two organic radicals bonded to sulfur, and further it would be unclear how such groups are neutralized."

8. In regards to (b), applicant's statement that all preparative examples include non-sulphonated dicarboxylic acids is not seen to be relevant as they are used in making the side chains and are not concerned with the components of the main chain, which is the issue addressed in the rejection. The further statement that "--- the term polycarboxylic acids refers to the fact that the main chain may have several polycarboxylic side groups also does not address the issue. The issue remains that polyacrylic acid, polymethacrylic acid, or an ester of these acids, are polymeric acrylic acid, methacrylic acid, or esters of these acids (each are mono-carboxylic acids). Polymeric aliphatic, cycloaliphatic and aromatic polycarboxylic acids, would include polymers of polyacids, e.g., dicarboxylic acids, and polyanhydrides.

9. In regards to (c), applicant's argument that the terminal oxygens on the side arms are shown prior to reacting with carboxylic groups to form the ester linkage is also not deemed to be persuasive as the merits of the stated rejection are not addressed. It remains that the formulas shown in Claim 3 indicate an attachment of the polyester side chain through a peroxide linkage, i.e., "G" is a unit bearing two terminal oxygen atoms, whereas the only teaching in the specification is attachment through an ester group. It may be that applicant intended the "-O-" at the left end of each of the formulas to be a carbonyl group, i.e., "-C(O)-", which is enabled, but this isn't shown in either the claims or the specification.

10. **Claims 3 and 7-9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for comb polymers wherein R<sup>2</sup> is an amino functional radical, or an alkoxy radical, does not reasonably provide enablement for comb polymers wherein R<sup>2</sup> is a "-COOR<sup>2</sup>" group.** The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. As the entities to which the R<sup>2</sup> radical is connected contains an acyl terminal group, the

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resulting end group would be an  $\alpha$ -ketoester. It is not seen that the specification gives any teaching as to how such polymers are made. It is pointed out that when  $R^2$  is "O-R<sup>5</sup>" the terminal group is an ester.

***Claim Rejections - 35 USC § 112, Second Paragraph***

11. ***Claims 2-4 and 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

12. The language of Claim 2 is indefinite because of improper Markush language, and the indefiniteness of the groups "salts or esters". This rejection can be overcome by inserting "consisting" in the second line following "selected from the group". The indefiniteness of the salts or esters can be overcome by inserting "thereof" following "esters" for which there is a basis in the unamended claim.

13. The language of Claim 3 is indefinite for a number of reasons, which follow.

a. Improper Markush groups are still used in the claim. This can be overcome by substituting "chosen from the group consisting of" for the language "chosen from the group of". Further, the last member of the group needs to be preceded by "and", i.e., Formula II and Formula III need to be separated by "and", in the definition of "G", "and" rather than "or" needs to precede "derivatives", and in the definition of "R<sup>2</sup>", an "and" needs to separate the last two members of the group. The basis of this rejection was stated in Detailed Action § 19(c). In the definition of "R<sup>2</sup>", in the first member of the group, the language needs to be "aromatic, aliphatic or cycloaliphatic ---". This is a nested Markush group of the form is A, B, C or D.

b. It cannot be told whether or not the "average molecular weights" are on a number average, weight average, or some other basis. Further, "p" and "o" would not be expected to have any effect on the molecular weight of the main chain. The basis of this rejection was stated in Detailed Action § 19(e) of the previous Office Action. Applicant traverses the rejection arguing that persons of skill in the art would recognize that the usage of average molecular weight is the number average molecular weight. This is not deemed to be persuasive because it is not supported by any evidence. The further statement that "[t]his is the most commonly used" even if

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supported by evidence would not overcome the rejection because it remains that other bases of average molecular weights are also used.

c. It is not seen that the molecular weight of the unit "G" has any relationship to the average molecular weight of the main chain as is currently indicated for limitations of coefficients k and m. The basis of this rejection was stated in Detailed Action § 19(g) of the previous Office Action. Applicant asserts that the amendment addresses the basis of the rejection, which it does not. Therefore the rejection is maintained.

d. The definition of G is indefinite because the "m" in "C<sub>m</sub>" is not defined.

e. In the definition of "G", "D", "R<sup>1</sup>" and "R<sup>2</sup>" the language is indefinite because of the terms "can also be", "may or may not be", and "can be", making it unclear as to whether the groups are, or are not as defined. Generally, this type of rejection can usually be overcome by using "is" or "are". The basis of this rejection was stated in Detailed Action § 19(h) of the previous Office Action, and was not fully addressed in the amendment.

f. The definition of "R<sup>1</sup>" is further indefinite because there are no "amines" present which have "alkyl positions", rather there are "ammonium" compounds present. Further, the alkyl positions cannot be occupied by hydroxyl groups, else they would no longer be alkyl groups. The basis of this rejection was stated in Detailed Action § 19(j) of the previous Office Action. The amendment has not overcome the basis of this rejection.

g. The definition of "R<sup>2</sup>" is further indefinite because it is unclear what "mono- or polyethoxylated sulphonated organyl radicals bridging via ether functions consist of. The basis of this rejection was stated in Detailed Action § 19(k) of the previous Office Action, which wasn't fully addressed by the amendment.

14. Claims 4, 7 and 10-12 are indefinite because as above, it cannot be told whether or not the "average molecular weights" are on a number average, weight average, or some other basis. The basis of this rejection as applied to Claim 4 was stated in Detailed Action § 20 of the previous Office Action. To the degree that applicant would argue that persons of skill in the art would recognize that the usage of

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average molecular weight is the number average molecular weight, the argument is not deemed to be persuasive for reasons stated above regarding Claim 3.

15. Claim 6 is indefinite because Claim 2 does not provide an antecedent basis for polyacrylic acid, polymethacrylic acid, or an ester of these acids. Further, maleic acid, maleic anhydride and fumaric acid are not polymeric polycarboxylic acids, and therefore cannot be members of the specified Markush group. Additionally, the chemical structure of polynorbornenic acid is unclear.

16. Claim 8 is indefinite because of the period present half way through the claim, and is further indefinite because of the language "can be". This rejection can be overcome by substituting a comma for the period and "is" for "can be".

#### ***Obviousness Double Patenting Rejection***

17. **Claims 1-4 and 6-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-12 of copending Application No. 10/090,525.** The basis of this rejection was stated in Detailed Action § 24-25 of the previous Office Action. Applicant's request to hold the filing of a terminal disclaimer in abeyance until the later-issuing copending application is found to be allowable is noted. Thus, the rejection is maintained.

#### ***Evidence of Common Ownership***

18. Claims 1-4 and 6-12 are directed to an invention not patentably distinct from Claims 1-4 of commonly assigned copending Application No. 10/090,525, which has a different inventive entity. The reasons are discussed in the previous Office Action. Applicant has not as is required under 37 CFR 1.78(c) and 35 U.S.C. 132, either shown that the conflicting inventions were commonly owned at the time the invention in this application was made, or named the prior inventor of the conflicting subject matter. This requirement was set forth in Detailed Action § 38-41 of the previous Office Action. Applicant is reminded that failure to comply with this requirement will result in a holding of abandonment of the application.

#### ***Priority Claim to Earlier Application***

19. If applicant desires priority under 35 U.S.C. 120 based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under

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35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

***Action Is Final***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


22. This application contains Claim 5 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Future Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R Wilson whose telephone number is 703-308-2398.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 703-308-2450. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The unofficial direct fax phone number to the Examiner's desk is 703-872-9029.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.

  
**D. R. WILSON**  
**PRIMARY EXAMINER**